A STUDY OF MEDIA INFORMATION HANDLING PROBLEMS AND RECOMMENDED SOLUTIONS IN HONG KONG ADVERTISING AGENCIES

by

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ABSTRACT

For the past two decades, information proliferation is part of contemporary business life. In the media advertising field, which the author has been associated with for the past ten years, the situation is particularly acute because of its fast growth rate and competitive nature.

Prompted by proponents on electronic publishing such as John Naisbitt, the study here attempts to investigate into the viability of building an electronic media information databank to solve the media information explosion problems as encountered by Hong Kong's media advertising professionals. This research project took the form of several empirical studies, involving a general survey on the relevant industry environment and one on the media information needs for Hong Kong's advertising industry. A prototype was built to meet with the industry requirements so discovered from the latter study and finally test- marketing was carried out on the target group of media professionals from Hong Kong's international advertising agencies.

The results of the research revealed that the industry has unmet needs in media information management. The author believes that the product proposed here will be commercially feasible if sophisticated marketing efforts and sufficient market education are given.

However, the case does point to the fact that for electronic information systems to succeed in Asia, they should find markets across Asia and around the world so that they will have the economy of scale, an important element of success for databanks of other applications in western countries.

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CHAPTER 1

INTRODUCTION

The Information Age and the Information Society

With the development of microcomputer technology and the growing demand for the service industry, more and more people become aware that a new type of society has evolved. It is a new kind of Society after the Industrial Society, and most people have come to identify it as the Information Society.

In the words of Alvin Toffler, the famous writer who produced the best-sellers Future Shock, The Third-Wave, the "Second Wave", i.e., the Industrial Revolution was past and the "Third Wave", has definitely come of age. One of the characteristics of the Third Wave it that it is a "info-sphere" versus a "techno-sphere".In fact, the sum total of human knowledge was estimated to be doubling every ten years by 1950 and doubling every five years by 1970. (Megatrends, p. 17) At the same time, lifestyle is changing -- markets are demassifed and people's information needs thus get sophisticated. On the technology front, the "intelligent environment" is flourishing. In the United States, the amount of expenditure spent on "distributed data processing " were estimated to be multiplied by ten times in the year 1978- 82 (The Third Wave, p. 180). In fact the "social memory has so much been expanded that fresh social energies can be unleashed." (The Third Wave, p. 188) Another American future writer John Naisbitt in predicting the ten megatrends for the American Society, talked about "we are drowning in information but starved for knowledge". (Megatrends, p. 17) He went on to say that uncontrolled and unorganised information is no longer a resource in an information society. Instead it becomes the enemy of the information worker. This scenario has given rise to the "new electronic publisher who provide on-line data bases, communication channels for sorting and selecting".

The Case in the United States and Japan

The United States is probably the most-advanced in the information industry, particularly in its integration with telecommunication and computing. A famous example is the Warner Brothers Qube system operating in Columbus, Ohio, which besides carrying cable television, is also a public response system used in homes for purchases and marketing researches. The inroads to the so-called "telematic society" (French originated term for the integration of telecommunications and computing) as propounded by James Martin, have already been made, at homes and on the business fronts. Traditional companies in publishing or non-publishing industry, like Dow-Jones or Bell Telephone, etc., have all developed the electronic information side of their business. It seems that the business application end of the telematic age is particularly flourishing.

However, the first person to mention the term "Information Society" is a Japanese, Professor Umecho of Kyoto University in 1963 (Hong Kong Economic Journal, Nov. 3, 1988). Here Professor Umecho formulated the view that economic powerplay will be indivisible from information powerplay. In 1984, the Japanese started the ISDN experiment in two areas of Tokyo--Mitaka, Musashino. This experiment is an integrated digitalised information exchange system where individuals participate into the information services and goods purchases and other services such as home banking provided by two thousand companies.

While some people cherish the arrival of the Information Society -- a society where machines are slaves, where human beings are more rational, have more leisure time for self enrichment, there are also others who hold the opposite view that machine will take over the control of human being as human being. Whatever is true, the significance of the Information Age can be illustrated by the following excerpt from the following OECD report:

> The emergence, under the leadership of the US information industry, of powerful integrated service firms, consortia of closely-knit groups of companies, combining computing power of their own without precedent, unrestricted access to countless data bases, assured usage of worldwide networks, an expertise unparalleled in variety and depth, together with unique marketing and managerial abilities. This new organizational

> configuration has--so far--no equivalent in either Europe or Japan. It may well turn out to be superior, in power terms, to the old-fashioned monopolies and oligopolies. ("The International Data Market Revisited" OECD DSTI/ICCP/83.25, p. 27)

The Case in other Parts of the World

Europe , with particular reference to Britain, has been a pioneer in the arrival of the "telematic society". The British Post Office was the first in the world to combine the power of the home television set and the telephone line to provide the home user to look at news reports, movie listings, weather forecasts, stock market figures etc. This Prestel system backed up by government subsidies have not yet proved to be commercially viable. It seems that the British experience did benefit the world. (Telematic Society, pp. 201-207)

However, in general, electronic information industry in Europe is not flourishing as much as in the U.S. and Japan. According to Professor Eli M. Noam, Director of Research Program in Telecommunications and Information Policy, Graduate School of Business, Columbia University, there was a trade imbalance in terms of information flow between Europe and the United States-- there was a lot of export of data from the United States to Europe but not vice versa.

The Case in Hong Kong

Hong Kong, generally speaking, is much less-developed in its information industry compared with the above-mentioned developed countries but is quite advanced amongst most Asian countries. In the seventies, information companies began to appear, including local- based and multinational companies such as Dun & Bradstreet. In 1978, Hong Kong Telephone Company began to introduce the Viewdata system, which is considered to be

mildly successful. It is primarily a one-way informational system as the technology involved will make it very slow for two-way communication. Apart from private databanks, and a few databanks pertinent to vertical

markets such as court case system for the legal profession, there are almost no other locally assimilated commercial electronic databanks.

About This Research Project

The author has been working in the media industry in the past ten years. The media industry, is an important manifest of the complex information society we are living in today. Having been the media directors for a number of international advertising agencies in Hong Kong, the author had the full impact of the information explosion experience for the practitioners in the industry. Naisbitt, as earlier mentioned,suggested the role of electronic publishing to bring order to the chaos of information explosion. How will this apply to the advertising professionals who have to deal with hundreds of media information in order to select media advertising candidates? It is hoped here that by drawing on the wisdom of prophet-writers such as Naisbitt and the author's past experiences in the media advertising industry, a sound and valid solution, the first ever in Asia except possibly Japan, can be worked out. Specifically, the objectives of this research study will thus be to assess the general information handling situation with Hong Kong's advertising agencies, particularly with their media departments (subject of Chapter II), and to research on more specific micro environments within these advertising agencies in Chapter III and to propose and test the viability of publishing a media information electronic databank for relieving the situation (subject of Chapter IV). Finally, the author tries to look at other broader issues such as implication for other Asian markets, legal considerations etc before summarising the findings in Chapter V.

CHAPTER II

THE INFORMATION EXPLOSION SCENARIO WITH HONG KONG'S ADVERTISING AGENCIES

The Fast Growing Advertising Business

Hong Kong's advertising agency business is well- developed in the sense that all of the world's major advertising agencies have set up their office here, mostly through wholly-owned subsidiaries. This is partly due to the growth of Hong Kong's economy in the last two decades and a free economic policy practised by the Government. Advertising expenditure from Hong Kong in local media amounts to 4 billion Hong Kong dollars in 1987, representing a growth rate of at least 17% annually over the past ten years (Table 1). The same order of growth is also applicable to other Asian countries such as the "four little dragons". Fuelled by this growth, there has been a phenomenal growth in the media industry, both by the number of local titles (Table 2) and by the number of foreign titles that find their way into the Asian markets through the local or regional media representatives they appoint.

The Human Resources Problem

With international advertising agency network, management, creative, account servicing and media expertise have thus been brought to Hong Kong. Of all the expertises that are importable, it is generally recognised that media expertise are about the least importable. This is reflected in that while all the eighteen members of the 4A's (Association of Accredited Advertising Agencies, the trade association comprising mainly of the international advertising agencies who abide to certain industry standards set up collectively by the Association) have expatriate creative directors, only five out of them have expatriate media directors. According to a recent interview the author had with the leading executive search firm for advertising and marketing personnel in the Asian region,

TABLE 1

HONG KONG ADVERTISING EXPENDITURE 1978-87
(Hong Kong Dollar '000s)

Year	Total
1978	468510
1979	600170
1980	839750
1981	1017588
1982	1230084
1983	1453804
1984	2355000
1985	2863000
1986	3375000
1987	3899000

Source: Hong Kong Media Research/ Hong Kong Adex

TABLE 2

THE NUMBER OF REGISTERED NEWSPAPER AND PERIODICAL IN HONG KONG 1979-1988

Year	No. of Newspapers	No. of Periodicals	Total
1979	114	326	440
1980	96	386	482
1981	71	417	488
1982	69	443	512
1983	76	453	523
1984	67	489	556
1985	65	518	583
1986	69	517	586
1987	67	562	629
1988	65	618	683

Source: Hong Kong Government Information Service,November figures

agency staff turnover is almost alarming. Disillusion is fairly commonplace amongst the people in the industry. Intense competition drives people to work long hours in order to satisfy clients' growing and ever- demanding requests. The attraction for people to join media departments is particularly low because there is a commonly held belief that work in the media department is manual, a lot of number crunching and hard work but not conducive to creative thinking and recognition.

The Functions of the Media Department in an Advertising Agency

The Media Department is one of the key departments in an advertising agency. It is normally headed by a media director supervising a number of media managers, media executives (sometimes they are further differentiated into media planners and media buyers), research executives and other clerical assistants. As a whole, the media department is responsible for keeping track of what clients and their competitors' media advertising activities, advising clients on media strategy and finally coming up with detailed media recommendations, a process commonly referred as media planning. For media planning purposes, typically a media executive has to go through loads of data supplied by media-owners. These data include circulation data, rate data, research data etc. In order to select amongst these media, a lot of qualitative as well as quantitative evaluations have to be done, using media self-supplied data or other syndicated studies supported by a group of media. Once a selection has been made, the media buying process will begin and a media executive has to go through lots of media data relating to the operational side, such as the advertising material requirements for the selected media. After the media buying process, post-advertising evaluations which checks cost against audienceship/readership will normally have to be done.

Thus it can be seen that a media executive's job is a heavily involved with information. Made acute by general manpower shortage, media executives find themselves hard- pressed for time to distribute amongst seeing clients, seeing media suppliers, creative thinking, strategic thinking and going through the growing loads of media data worsened by the growing competition amongst those media.

Recent Moves in the Market

With the advent of the personal computer, the replacement of the mechanical parts of media planning and information handling by machines has been happening to counteract the scenario described in the last paragraph. Ten years ago, there was only one advertising agency in this town that had a personal computer to do a little number-crunching. Ten years later, almost all of the 4A's agencies have some computing power inside the media departments (results of Survey in Chapter III).

The scenario has come about with a lot of progress coming from the supplier side. In 1984, competitive media expenses and television rating information were first made available to the industry through on-line hook-up to Hong Kong Adex, a subsidiary of the British media research firm AGB-McNair, through Hong Kong Telephone's datapak data-communication system. This essentially took away part of the number crunching activities and at the same time, allowed for the application to media planning models to television planning. In March 1988, Survey Research Hong Kong launched its Microscope system which further put print media research data on personal computer disks for the usage of advertising agencies. As a result of all these, there is a general awareness amongst the industry to automise and let the machines become slave in place of human beings.

Now the above-mentioned data available on-line or on disks to advertising agencies all relate to media research data. It seems that the bulk of information handled by media executives, i.e., basic media advertising information such as rates has not been computerised. With the market technologically ready, the following chapter will explore the possibility of computerising those information for Hong Kong's advertising agencies.

CHAPTER III

STUDY ON AN ELECTRONIC MEDIA INFORMATION SYSTEM FOR HONG KONG

Survey on other Markets

Computerisation and office automation has been the popular way companies use to solve their information handling problems and increase efficiency since the sixties. The trend has also taken place with advertising agencies around the world.

Starting with the headquarters for international advertising agencies, mostly based in the U.S., media scheduling, media insertion order issuance and invoicing became the first few operations in the media department to be automised. In fact software packages to serve such purposes such as Mediaplan and Medialog became commercially available since the mid-eighties. Some of these software systems, whether they are proprietary products developed by agencies in-house or third-parties, do allow for carrying media rates and data, but such data mostly refer to major domestic media such as broadcast television, as in the case of the U.S. and Australia. Moreover, they normally require the end-user to input their own media data. Such systems are in essence, software systems but not media information databank. Their applicability to a non-American environment is limited because operating processes in international markets such as value-added taxes in Europe are quite different from the United States domestic media scene.

In Europe, the division between international and domestic media in Europe becomes increasingly blurred. There was a recent growth of media specialist shops which took up media planning and buying functions or media buying functions alone, usually on a pan-European basis. Some of these media shops even grew in size to demise the media departments in international advertising agencies. With their volume of advertising space buying and their international/regional outlook, some of

these companies have developed computerised on-line systems for access in their various centres around Europe. (Media International Dec.1988) But such databank are self-developed proprietary products and are not available to other advertising agencies.

In Asia, with the exception of possibly Japan, where advertising giants such as Dentsu might have their private media databank set up, there are to this date, no successful media information databank commercially available. In early 1988,an on-line media information system called "MediaNet" was launched in Singapore. The owner called for support from media owners who will be charged for listing and displaying fees so that their information become accessible to advertising professionals. The project has so far not gathered enough favourable responses and now looks like a commercial failure.

The Case for Hong Kong

Hong Kong is a much larger advertising market compared to Singapore, both in terms of advertising in the local as well as the international market. Will an electronic media information databank that is centrally updated and maintained to serve the whole industry be viable? Why did it fail in Singapore?

A central electronic media information databank could be a solution to the aforementioned information explosion scenario because it has the following merits:

1. Computers are getting so popular nowadays that it is almost difficult to find any company that does not own a computer.

2. Electronic information can be retrieved instantaneously by multiple access paths resulting in high efficiency in data manipulation.

3. By designing a good database system that incorporates the essential features common to the most of the advertising media, media data will become structured and easily comparable.

4. Computer can add computational power to the data captured and thus add to its value.

5. By sharing the cost of information collection and updating, advertising agencies can gain access a vast resource at a reduced cost.

6. Due to high staff turnover and labour shortage aforementioned in media departments, a central media information databank might help relieve low-level manpower and let machines do the drudgery instead.

Since the need for information management is more acute with the information workers, i.e., the media executives, it is not difficult to see that Singapore fails because the burden or source of financial support for such a project should come from advertising agencies instead of media-owners.

Objectives of the Research Study

In order to explore the issue further, the author conducted a survey on the views of the advertising agencies, with the primary objectives of

1. assessing the acuteness of information explosion syndrome with advertising agencies

2. assessing the macro-environment in relation to setting of a central information databank particularly in the aspects of

   a) degree of computerisation

   b) degree of staff shortage

   c) degree of office space shortage

   in Hong Kong's advertising agencies

3. testing the hypothesis that a central electronic media information databank is a workable solution to the information explosion syndrome with Hong Kong's advertising agencies.

Research Design

For the first objective, an exploratory research design is used. While literature review indicate that information explosion syndrome does exist in general, the extent as it applies to Hong Kong's advertising agencies

needs to be assessed. It is felt that interviewing people in the industry to find out the time they spend with sorting out and working with media information is the best approach. These people should comprise heads of media departments, who are most knowledgeable about the overall situations as well as people in the rank and file who are bombarded with the day-to-day information handling tasks.

By expanding the scope of the interview, this exploratory approach also serves as an preliminary research for achieving objective 3.

To study the second issue, a descriptive research comprising of a survey with the media directors was used. A structured questionnaire was used. Testing the last hypothesis, which is the primary objective of this research study, is a more complicated research process since it involves some future plan of action and the forecast of its after-effects. This falls into the area of new product research and test marketing.

Here the technique for testing customer intentions with the use of a product prototype was used.

Sampling and Methodology

The universe for our study is Hong Kong's advertising agencies. Since the 4A's represents about 80% of the billings of advertising dollars in Hong Kong, it is felt that the research itself is quite adequate when confined to members of the 4A's. For the first exploratory study, five advertising agencies were interviewed. For the second descriptive study, it is felt that a full survey on all members of the 4A's is worth the efforts for obtaining the full accuracy of the results as there are only eighteen of them. The last study used a user jury and it took advantage of the monthly meeting occasion of the media sub-committee of the 4A's. That committee is comprised of the media directors or their deputies and is set up to assess and resolve industry-wide issues. It is understood that attendance rate is normally good, running from 50% to 100%. It is felt that the viability of such a central databank concept would stand if this group finds it favourable.

The Survey

In September 1988, the author initially interviewed five members of the 4A's, with three media directors and three media executives (one research executive, two planners). Informal discussions were conducted to find out the amount of time they or their department members spend on sorting, analysing, making use and filing media information and their initial responses to the setting up of a central media information databank.

The second stage of the survey was conducted in October 1988 by interviewing the media directors of all eighteen members of the 4A's. A discussion guide together with some open questions was devised and is attached in Appendix I.

A face to face interview was arranged whenever possible. When some of the media directors got too busy telephone interviews following the same guide were used. When interviewing with media directors were not at all possible, their second-in-command were pursued.

Results from the Survey

During the exploratory survey, it is felt that interviewing one media director who is renowned for his foresight and is one of the most respectable in the industry would serve the purpose of getting a good insight into the issue. All interviewed agreed that the time media executives spend in information handling is enormous. While most people could not quantify it, one research executive pointed out that he spent an average of at least eight hours a week in going over newly received media information. Our respectable media director shared the vision of building an electronic media information databank but his is a private one for the use of his agency. In fact, plans have been drawn up and the databank is meant to be quite comprehensive and well thought-out. One of the other media directors also shared the same thought of building an electronic media databank of his own, although it is only meant to be a very simple one containing a few essential information covered in point 5 of Appendix I and little effort will be spent to connect the different pieces of information and allow for more sophisticated media planning purposes in the future. All these people reacted to the idea of a central electronic media

information databank with some enthusiasm, the degree of which varies within expected level of fluctuation. The rank and file all welcomed it and hoped that their boss will pay for it. All media directors said that they would like to see one happen within reasonable budget and even our respectable media director saw this central databank project as a friendly competition to his own idea and will eventually lead to more market awareness for such services. He did not see it as a project that will undermine his competitive positioning for a technically advanced agency service.

The main finding from the second phase of the survey confirms that agencies are now largely computerised. Seventeen out of the eighteen interviewed all have at least one IBM PC. Quite a number of them are networked (see Table 3). But applications are mainly confined to accounting systems, word processing and spreadsheets. While all are aware of the media information explosion syndrome, few attempted to solve the problem. Five of them have a partial primitive solution to the scenario, four out of which are amongst the top five agencies in Hong Kong. These larger agencies afford to have some attempt to remedy the situation, but they find the understaff situation and high pressure from day-to-day operation prevent them from having more long-term investment. In fact media department staff turnover in 1988 was estimated to be around 25-30%, with one reaching the 80% mark. It seems that apart from one agency, no other is equipped to solve the problem in-house and most of them are quite receptive to the idea of a central media information databank provided that the price is right.

The issue of a "right" price was discussed and it seems that rates agencies are currently paying for other media research electronic databases could be used as a reference. There was a strong indication that an annual subscription fee of over Hong Kong dollars forty thousand would be unacceptable and the level of resistance would be pretty low if the fee is under Hong Kong dollars twenty thousand.

While the foregoing survey reveals that initial reaction towards a central electronic media information databank is positive, further work has to be done to establish product viability--i.e., can such a system be designed to meet customer expectation and be financially viable. It seems that the

TABLE 3

DEGREE OF COMPUTERISATION AT HONG KONG'S ADVERTISING AGENCIES (Members of the 4A's)

Computerisation status		No. of Companies
a. Mini/micro as the main system		4
b. Have PC network -	IBM	4
	Apple/Macintosh	1
c. Have standalone PC's -	IBM compatible	17
	others	1

Note: PC = Personal computer

system can be supported by means of a modest subscription fee from the advertising agencies but can there be other sources of income? All these will be investigated in the following two chapters.

CHAPTER IV

THE PROPOSED ELECTRONIC MEDIA INFORMATION SYSTEM AND ITS FEASIBILITY

Building a Product Prototype

In order to test further the hypothesis that a central electronic media information databank is viable, it is felt that building a product prototype to specifically test potential customer response and market acceptance would be a positive approach to the issue. Its functionalities were formulated from the results of the exploratory survey in phase 1 together with the past industry experience of the author. Its essential features include all those described in point 5 of Appendix. The prototype was built on the popular IBM PC with a hard disk, which was found to be almost the universal machine available in the agencies. Two months were used in building the prototype, with the first month spending in defining the data specification and user expected outputs and the second month for a contracted software specialist to develop the system according to those specifications. The data specifications were formulated from studying the rate cards and other data provided in one hundred media kits from media circulating in indigenous/regional/global markets which are considered to be important for Hong Kong's advertisers. It is felt that such an international media coverage has three advantages--1) the media information handling problem is more acute for international media which is far more complicated than local media 2) there is a growing need for advertisers based here to advertise internationally 3) such a databank can be easily adaptable for other international markets.

The Prototype Presentation

The resulting system, together with some exemplary data was presented to the Media Sub-committee of the 4A's on January 12, 1989. This sub-committee was set up four years ago to deal with industry-wide problems and to coordinate training and development for the media professionals. It is a very convenient occasion to test new ideas geared to service them. The presentation took the form of first demonstrating the system, highlighting its functionalities, screen outputs (Appendix II) and reports and then followed by a discussion session. The whole process took around forty-five minutes. Nine out of the eighteen agencies were present at that meeting. All seemed to be quite satisfied with the functionalities and performance of the prototype. During the discussion, various questions were raised but there were mainly concerned with ways to maintain data accuracy and price. Data accuracy is a valid area of concern because accuracy is often found to be lost when data is transcribed from its source document to another medium. However the difficulty can be overcome by having the source document owners, i.e., the media-owners to validate the data stored inside the system, which in turn requires writing a small program for such a purpose. Some enquired about on-line information delivery versus disk delivery as a faster means of maintaining data accuracy while incurring a greater cost. Six out of the nine enquired about the level of fee the service wants to command and two enquired about a 4A's group discount. Other issues raised included copyright on syndicated media research data, which are regarded as data with restrictive ownership.

Summary

The process of building the prototype did confirm that such a system while technically sophisticated, can be developed with a small out-of-pocket cost, but industry experience and ability to communicate with the software development technical people as well as a flair for accuracy are of paramount importance.

It could be summarised from the presentation that the group of 4A's members took an open-minded and receptive attitude to the proposed

system. As revealed in Chapter II, rates within Hong Kong Dollars forty thousand per annum seems to be a reference price for this databank.

Based on intuitive thinking and rough calculation, while development cost and operating cost might be recouped, high-powered media industry executive power is needed to lead the project, and such persons may not be fully compensated by the agency subscription revenue potential of the project. Issues such as other sources of income will be explored in the next chapter in order to examine the viability of the subject more fully.

CHAPER V

OTHER CONSIDERATIONS AND CONCLUSIONS

Financial Considerations

It is felt that other sources of revenue should be explored to fully investigate into the viability of the solution. Subscriptions from publishers or media representatives can add on to revenue potential and so is the possibility of soliciting advertising from media owners. All these lend to more favourable considerations to the solution of a central electronic media information databank for Hong Kong.

Another dimension which can add to the project viability and revenue potential is sales to other countries, particularly in Asia. There is a certain degree of resemblance in the needs of international advertising for countries that enjoy more or less the same degree of development, i.e., Hong Kong, Singapore, Taiwan, South Korea, Thailand. With small modifications in terms of data to be captured, the system can readily serve those other Asian markets. Since financial predictions are based on many variable factors and assumptions, it is felt that a detailed study by financial experts can be an area for further research in the future.

Validity of Prototype

One might question about the validity of the prototype in representing the final product. This is always a concern for new product testing. In this very case, the prototype gained customer acceptance and should be taken as a successful experiment leading to the building of the final product when decision is made to forge ahead with the product in the future.

Copyright Issues

As in all technologically innovative products, copyright is an issue that needs to be addressed to ensure compensation for the original input of the product owner or innovator. In this case, copyright comes in two- fold. Firstly, there is the copyright of data. In this case this involves published data and the problem itself should not be lending much trouble, although technically, publishing any other people's data is infringing on their copyright. In Hong Kong, there is no specific legislation covering copyright infringement on electronic media when the source is in hard-copy form and it is unlikely to become an issue given that there is no conflict of commercial interest.

The other side of the copyright issue is the unauthorised copy of the discussed databank, as copying personal computer software is still rampant in Hong Kong. There is a good chance that this might not happen a lot given that its potential customers are largely American international companies, which usually refrain from software pirating, for corporate ethical reasons.

Conclusion

The study uses a largely subjective approach, which is common for predictive issues. In the first and second phases of the study, the views of the professional experts, i.e., media directors, were solicited separately and independently. In the third phase, which involves testing with a prototype on a group basis, the possibility that the group together might reinforce each other and thus come to similar conclusions has been taken into consideration. Given that the Industry group often gather to bargain and negotiate with suppliers, their generally favourable responses (six out of nine) are strong proof of their acceptance of the solution.

The results of this research project indicates that the idea of a central electronic media information databank to solve the media information explosion syndrome and to enhance productivity might be viable, subject to further financial scrutiny. The success of the proposed project also depends on other very important issues such as marketing efforts. In the

Hong Kong advertising industry, competitiveness drive companies to focus mainly at short term gains. How should such "internal productivity tools" be marketed so that agency management can perceive the intrinsic and more long-term values of such a system?

Since information explosion must be affecting most of the knowledge workers in the world, and definitely our media advertising counterparts in the rest of Asia, the author could see the impact of the success of the proposed solution . In fact, solutions in the form of electronic databanks could be applied to other information-heavy industries in Asia, which is still very deficient in tools for the information worker. In order to make such advances, the region needs more innovative, business- minded electronic publishers and at the same time, more forward-minded information users particularly those in decision-making levels, who are prepared to take up the challenge of information explosion era.

APPENDIX I

DISCUSSION GUIDE ON PHASE TWO INTERVIEWS

1. Your Agency Environment and the media filing system

1.1 How many people in the media department?
How many are planner, buyer, researcher, or assistant?

1.2 How much new media information do you receive in a week? Please quantity by the number of hours you go through them in a typical week.

1.3 Are media information centrally filed? Are there dedicated persons to do the filing? Or are they filed by individual planner/buyer/researcher?

1.4 Do you keep old media information? How back-dated data do you keep?

1.5 What % of time do the above-mentioned media executives spend in looking up information and computing (hours in a week)

2. Does your agency have any attempt to keep track of the media universe on a computer?

3. Computerisation at your Agency

3.1 What computer system does your company have?

3.2 What sort of sub-system does the media department have?
Which brands & models?

3.3 Current usage purpose
store media rate
store research data
media scheduling invoicing to clients
others

3.4 What computerisation plan does your agency have in the future?

4. What staff turnover rate do you experience in 1988?

5. Views to a central electronic media information databank
How would you react to a system that

5.1 help you to select media by geographical area, editorial content and circulation amount, 5.2 contains the basic rate card information as well other essential data such as circulation breakdown, editorial calendar, discount structure, booking & contact information, research & readership, mechanical requirements

5.3 produce commonly used reports for media cost efficiency comparison and material requirement purposes.

6. What level of annual subscription can you put behind such a databank, which will be maintained centrally for all agencies on a monthly basis?

6.1 under HKD20,000

6.2 HKD 20,000 - 40,000

6.3 over HKD 40,000

APPENDIX II

PROTOTYPE SAMPLE OUTPUT SCREENS

M I P O W E R - M A I N M E N U

SELECT MEDIA

RETRIEVE INFORMATION ON EACH MEDIA

COMPARE MEDIA & PRODUCE REPORT

MATERIAL REQUISITION REPORT

[Esc] TO QUIT

MIPOWER - SELECT MEDIA MENU

SELECT MEDIA BY USER SPECIFICATIONS

SELECT MEDIA BY ALPHA

SELECT MEDIA BY MEDIA CODE

[Esc] TO QUIT

```
        MIPOWER - SELECT MEDIA BY USER SPECIFICATIONS

REGION SELECTED    :
AREA SELECTED      :
EDITORIAL CONTENT  :
FREQUENCY          :
LANGUAGE           :

                  ┌──────── SELECT REGION ────────┐
                  │UNSPECIFIED                    │
                  │CANADA                         │
                  │UNITED STATES                  │
                  │NORTH AMERICA REGION           │
                  │UNITED KINGDOM                 │
                  │FRANCE                         │
                  │GERMANY                        │
                  │AUSTRALIA                      │
                  │JAPAN                          │
                  │ASIAN REGIONAL                 │
                  │EUROPE                         │
                  └─ [Esc] to Quit ───────────────┘

[Esc] TO QUIT
```

MIPOWER - SELECT MEDIA BY USER SPECIFICATIONS

REGION SELECTED : ASIAN REGIONAL
AREA SELECTED : UNSPECIFIED
EDITORIAL CONTENT : CONSUMER
FREQUENCY : UNSPECIFIED
LANGUAGE : UNSPECIFIED

SELECT MEDIA

MEDIA CODE	MEDIA NAME	SPLIT AREA	SUB AREA
ASBU	ASIAN BUSINESS	ASIAN REGIONAL	
TIME	TIME ASIA	ASIAN REGIONAL	
ASBU	ASIAN BUSINESS	ASIAN REGIONAL	HONG KONG
ASBU	ASIAN BUSINESS	ASIAN REGIONAL	MALAYSIA
ASBU	ASIAN BUSINESS	ASIAN REGIONAL	MAL/SIN/HONG
TIME	TIME ASIA	ASIAN REGIONAL	MAL/SIN/HONG
TIME	TIME ASIA	ASIAN REGIONAL	SOUTH EAST ASIA
ASBU	ASIAN BUSINESS	ASIAN REGIONAL	SINGAPORE

[Esc] to Quit

[Esc] Quit [S] Select media [R] Region [E] Edit. [F] Freq. [L] Lang.

MIPOWER - RETRIEVE MEDIA INFORMATION MENU

GENERAL INFORMATION OF MEDIA

CIRCULATION BREAKDOWN

EDITORIAL CALENDAR

RATE CARD INFORMATION

DISCOUNT / SURCHARGE STRUCTURE

BOOKING & CONTACT

RESEARCH INFORMATION

MECHANICAL REQUIREMENT

[Esc] TO QUIT

SCR:MP210 MEDIA BASIC INFORMATION ENQUIRY

MEDIA	:	TIME ASIA
PUBLISHER	:	TIME INC.
EDITORIAL CONTENT	:	CONSUMER
PUBLICATION FREQUENCY	:	WEEKLY
PUBLICATION SCHEDULE	:	MONDAY
NO. OF COLUMNS/PAGE	:	3
COLUMN WIDTH	:	
TRIM SIZE	:	206mm (WIDTH) 276mm (HEIGHT)
PRINTING METHOD	:	OFFSET
BINDING PROCESS	:	SADDLE-STITCHED

[Esc] TO QUIT

MIPOWER - CIRCULATION BREAKDOWN ENQUIRY

MEDIA NAME : TIME ASIA

BASE ON YEAR : 88

SPLIT RUN / AREA		TOTAL CIRCULATION
ASIAN REGIONAL		253048
ASIAN REGIONAL	MAL/SIN/HONG	57848
ASIAN REGIONAL	SOUTH EAST ASIA	119584

[Esc] TO QUIT

SCR:MP230 EDITORIAL CALENDAR ENQUIRY

MEDIA : VOGUE AUSTRALIA

ISSUE DATE	EDITORIAL DESCRIPTION	BOOKING DEADLINE	MATERIAL DEADLINE
890101	BEAUTY/TRAVEL SUPPLEMENT	10/05/88	10/19/88
890201	WINTER PREVIEW	11/09/88	11/16/88
890301	AUSTRALIAN COLLECTIONS 1989	12/07/88	12/14/88
890401	VOGUE MEN STYLE GUIDE FOR WINTER	01/04/89	01/11/89
890501	RICH ADORNMENTS	02/01/89	02/08/89
890601	RESORT DRESSING UNDER THE SUN /TRAVEL SUPPLEMENT	03/08/89	03/15/89
890701	WORKING WOMEN TRANS-SEASONAL LOOKS	04/05/89	04/12/89
890801	FACING UP TO SUMMER	05/03/89	05/10/89
890901	AUSTRALIAN COLLECTIONS FOR SPRING /SUMMER	06/07/89	06/14/89
891001	REALISTIC CLOTHES & ACCESSORIES	07/05/89	07/12/89
891101	FRAGRANCE	08/09/89	08/16/89
891201	CHRISTMAS BUYING GUIDE	09/06/89	09/13/89

[Esc] TO QUIT

```
SCR:MP240              GENERAL RATE CARD INFORMATION ENQUIRY
MEDIA                  : TIME-TIME ASIA
EFFECTIVE DATE         : 890109          CURRENCY    : (USD)UNITED STATES DOLLAR
RATE PROTECTION        : NO RATE PROTECTION
BOOKING DEADLINE       :                 (MMDDYY)
EXPIRY DATE            :                 (MMDDYY)

------------------------- OVERALL EXTRA CHARGE --------------------------
GUARANTEE POSITION     :      %          MULTIPLE PAGE DISCOUNT : Y
GOVERNMENT TAX RATE    :  0.00%          VOLUME DISCOUNT        : Y
ADV.PAYMENT DISCOUNT   :  2   %
QUALIFYING CONDITION   : 30   Days       TOTAL MAXI ALLOWANCE   : 25.00%

                         AMOUNT     %
                         ------     --
BLEED PAGE             :            15
ADD 1 COLOUR           :       0    0
ADD 2 COLOUR           :       0    0
ADD 3 COLOUR           :       0    0
ADD SPECIAL COLOUR     :       0    0
                       :       0    0


[Esc] Quit  [O] Other Effective Dates  [D] Detail Info
```

SCR:MP2401 ADS-RATE DETAIL INFORMATION ENQUIRY

MEDIA : TIME-TIME ASIA
EFFECTIVE DATE : 890109
[S]PLIT-RUN : (AR)ASIAN REGIONAL
( )
[A]DVERTISEMENT TYPE : GENERAL
[P]APER STOCK : UNSPECIFY
P[O]SITION : RUN OF PAPER
[C]OLOUR : 4 COLOUR
[B]LEED : N
MIN. UNITS PURCHASED : 0

FORMAT: FULL PAGE

Freq.	Charge	Freq.	Charge
x 1	28,933	x39	26,618
x 6	28,354	x52	26,040
x13	28,065	x	0
x17	27,776	x	0
x26	27,197	x	0

[Esc] Quit [P] Previous Format [N] Next Format

```
SCR:MP250              DISCOUNT / SURCHARGE STRUCTURE ENQUIRY
MEDIA                        : TIME ASIA

STANDARD AGENCY DISCOUNT : 15%
VOLUME DISCOUNT          : YES
MULTIPLE PAGE DISCOUNT   : YES
FREQUENCY DISCOUNT       : YES
CASH DISCOUNT            : 2%
TOTAL MAXIMUM ALLOWANCE  : 25%
GOVERNMENT TAX           : 0%

[Esc] Quit [V] Volume [M] Multiple Page [F] Frequency
```

```
SCR:MP260A              BOOKING & CONTACT INFORMATION ENQUIRY
MEDIA                    : VOGUE AUSTRALIA
CONTACT PURPOSE          : AD SPACE BOOKING
ORGANISATION NAME        : IMR LTD
CONTACT PERSON'S NAME    : JOHN WILSON
CONTACT PERSON'S TITLE   : MANAGING DIRECTOR
ADDRESS                  : 7/F SPA CENTRE
                           53-55 LOCKHART ROAD
                           HONG KONG
TELEPHONE                : 5-8611377
FAX                      : 5-291694
CONTACT PURPOSE          : MATERIAL SHIPMENT
ORGANIZATION NAME        : VOGUE AUSTRALIA
CONTACT PERSON'S NAME    : PETIE DUNLOP
CONTACT PERSON'S TITLE   : QUEENSLAND MANAGER
ADDRESS                  : P.O. BOX 277
                           CLAYFIELD 4011
                           QUEENSLAND, AUSTRALIA
TELEPHONE                : 07-262-7654
FAX                      : 07-262-2332


                [Esc] TO QUIT
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SCR:MP280A          MECHANICAL REQUIREMENT ENQUIRY

MEDIA                        : TIME
MATERIAL REQ.-B/W ADS        : ARTWORK
MATERIAL REQ.-2C  ADS        : FILM
MATERIAL REQ.-4C  ADS        : FILM
FILM TYPE                    : POSITIVE
EMULSION DIRECTION           : DOWN
READING DIRECTION            : RIGHT
# COPIES OF PROOF            : 4
# SETS OF PROGRESSIVE        : 2
# SCREEN LINES - MONO        : 100
# SCREEN LINES - 2C          : 100
# SCREEN LINES - 4C          : 133


          [Esc] TO QUIT
```

MIPOWER - COMPARE MEDIA MENU

INPUT MEDIA CODE

TIME ASBU

1. TOTAL CIRCULATION
2. CIRCULATION BREAKDOWN
3. RESEARCH & READERSHIP
4. COST EFFICIENCY

CHOICE : 4

[Esc] TO QUIT

MIPOWER - COST EFFICIENCY COMPARISON

COMPARISON BASE : READERSHIP CIRCULATION

RESEARCH NAME : ASIAN PROFILE 5 (ASIAN)

RATE CARD INFORMATION :

MEDIA EFFEC

TIME

SELECT RATE INFORMATION FOR TIME

EFFECTIVE	SPLIT RUN	
890109	ASIAN REGIONAL	
890109	ASIAN REGIONAL	MAL/SIN/HONG
890109	ASIAN REGIONAL	SOUTH EAST ASIA

[Esc] to Quit

[Esc] TO QUIT

REPT:0001 MIPOWER - COST EFFICIENCY REPORT

COMPARISON BASE ON YEAR : 88

BASE ON THE READERSHIP OF RESEARCH : ASIAN PROFILE 5 (ASIAN)

COMPARISON PARAMETERS :

ADVERTISEMENT TYPE	: GENERAL
PAPER STOCK	: UNSPECIFY
POSITION	: RUN OF PAPER
COLOR	: 4 COLOUR
FORMAT	: FULL PAGE (NONBLEED)

MEDIA & SPLIT RUN	CIRCULATON/ READERSHIP	PAGE COST (in US$)	COST PER THOUSAND
TIME ASIA ASIAN REGIONAL/	96,918	28,933	238.53
ASIAN BUSINESS ASIAN REGIONAL/	48,001	6,500	135.41

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BIBLIOGRAPHY

Andela, G. "The International Data Market Revisited" at OECD Second Symposium on Transborder Data Flows, Proceedings of the Special Session of the Committee for Information, Computer and Communications Policy, OECD, DSTI/ICCP/83.25, Oct. 25, 1983.

Greenberger, Martin. Electronic Publishing Plus. White Plains: Knowledge Industry Publications, Inc., 1985.

Li, S N. "The Inevitable Arrival of the Information Society" Hong Kong Economic Journal, Nov. 3, 1988.

Martin, James. Telematic Society. New Jersey: Prentice-Hall, Inc., 1981.

Naisbitt, John. Megatrends. New York: Warner Books Inc., 1984.

Noam, Eli M. Electronic Publishing and Information Flows: Europe and the U.S. in Conflict. Columbia University, 1984

"Publicis-FCB tighten link", Media International, Dec., 1988, Vol.15, No.169, p. 1.

Toffler, Alvin. The Third Wave. London: Pan Books Ltd., 1981.